

Title (en)
Process for manufacturing a high-scale-integration mos device

Title (de)
Prozess zur Herstellung eines hoch- integrierten MOS Bauelements.

Title (fr)
Procédé de fabrication d'un dispositif MOS haute-intégration

Publication
EP 1780776 A1 20070502 (EN)

Application
EP 05425762 A 20051028

Priority
EP 05425762 A 20051028

Abstract (en)
A process for manufacturing a MOS device (30) envisages the steps of: forming a gate structure (24) on a top surface (20a) of a semiconductor layer (20); forming a doped source/drain region (28) within a surface portion of the semiconductor layer (20) in a position adjacent to the gate structure (24); and irradiating the doped source/drain region (28) with an electromagnetic radiation (12a, 12b). The electromagnetic radiation (12a, 12b) is directed towards the top surface (20a) with a propagation direction having an incidence angle ($+\pm, -\pm$) non-zero with respect to the normal (n) to the top surface (20a). In particular, the electromagnetic radiation (12) is an excimer-laser radiation and comprises a first beam (12a) and a second beam (12b) having incidence angles ($+\pm, -\pm$) opposite to one another with respect to the normal (n).

IPC 8 full level
H01L 21/268 (2006.01); **H01L 29/78** (2006.01)

CPC (source: EP US)
H01L 21/26513 (2013.01 - EP US); **H01L 21/2683** (2013.01 - EP); **H01L 21/324** (2013.01 - EP); **H01L 29/1083** (2013.01 - EP); **H01L 29/6659** (2013.01 - EP); **H01L 29/49** (2013.01 - EP)

Citation (search report)
• [XY] US 6001714 A 19991214 - NAKAJIMA MITSUO [JP], et al
• [Y] US 5401666 A 19950328 - TSUKAMOTO HIRONORI [JP]
• [XY] US 5953615 A 19990914 - YU BIN [US]
• [Y] US 2002019084 A1 20020214 - FRANCIS RICHARD [US], et al
• [A] US 2004087118 A1 20040506 - MAEGAWA SHIGETO [JP], et al
• [A] US 2002160592 A1 20021031 - SOHN YONG SUN [KR]

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DE FR GB IT

Designated extension state (EPC)
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